



ABSOLUTE MAXIMUM RATINGS

Peak Operating Voltage 45 V
 Reverse Current 50 mA
 Storage Temperature -55 to 150°C

Power Dissipation^a 350 mW

Notes:

a. Derate 2.8 mW/°C above 25°C

| SPECIFICATIONS (T _A = 25°C) UNLESS OTHERWISE NOTED | | | | | | |
|---|-----------------|--|--------|------------------|-----|------|
| Parameter | Symbol | Test Conditions | Limits | | | Unit |
| | | | Min | Typ ^a | Max | |
| Peak Operating Voltage ^b | P _{OV} | I _F = 1.1 I _{F(max)} | 45 | 55 | | V |
| Reverse Voltage | V _R | I _R = 1 mA | | 0.8 | | |
| Capacitance | C _F | V _F = 25 V, f = 1 MHz | | 1.5 | | pF |

| Part Number | Regulator Current ^c (I _F) | | | Dynamic Impedance ^d (Z _d) | | Knee Impedance (Z _k) | Limiting Voltage ^e (V _L) | | Temperature Coefficient (θ ₁) |
|-------------|---|------|-------|---|------------------|-------------------------------------|--|------------------|---|
| | V _F = 25 V | | | V _F = 25 V | | V _F = 6 V | I _F = 0.8 I _{F(min)} | | V _F = 25 V 0°C ≤ T _A ≤ 100°C |
| | mA | | | MΩ | | MΩ | V | | %/°C |
| | Min | Nom | Max | Min | Typ ^a | Typ ^a | Max | Typ ^a | Typ ^a |
| SST502 | 0.344 | 0.43 | 0.516 | 1.0 | 2.7 | 0.7 | 1.5 | 0.6 | -0.08 |
| SST503 | 0.448 | 0.56 | 0.672 | 0.7 | 2.0 | 0.5 | 1.7 | 0.7 | -0.12 |
| SST504 | 0.600 | 0.75 | 0.900 | 0.5 | 1.5 | 0.4 | 1.9 | 0.8 | -0.16 |
| SST505 | 0.800 | 1.00 | 1.200 | 0.4 | 1.0 | 0.3 | 2.1 | 0.9 | -0.20 |
| SST506 | 1.120 | 1.40 | 1.680 | 0.3 | 0.8 | 0.2 | 2.5 | 1.1 | -0.24 |
| SST507 | 1.440 | 1.80 | 2.160 | 0.2 | 0.6 | 0.12 | 2.8 | 1.3 | -0.28 |
| SST508 | 1.900 | 2.40 | 2.900 | 0.1 | 0.4 | 0.08 | 3.1 | 1.5 | -0.31 |
| SST509 | 2.400 | 3.00 | 3.600 | 0.09 | 0.3 | 0.06 | 3.5 | 1.7 | -0.34 |
| SST510 | 2.900 | 3.60 | 4.300 | 0.08 | 0.3 | 0.04 | 3.9 | 1.9 | -0.37 |
| SST511 | 3.800 | 4.70 | 5.600 | 0.07 | 0.2 | 0.03 | 4.2 | 2.1 | -0.40 |

Notes:

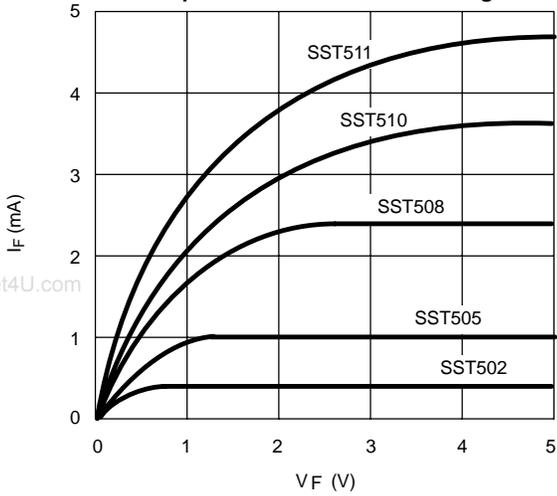
- a. Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.
- b. Max V_F where I_F = 1.1 I_{F(max)} is guaranteed.
- c. Pulse test—steady state currents may vary.
- d. Pulse test—steady state impedances may vary.
- e. Min V_F required to insure I_F = 0.8 I_{F(min)}.

NPA

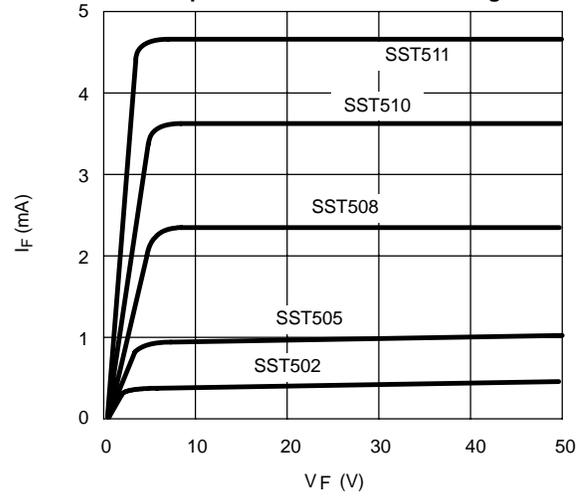


TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

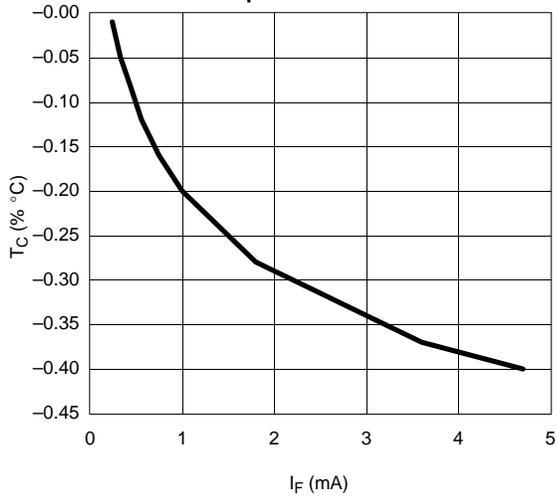
Output Current vs. Forward Voltage



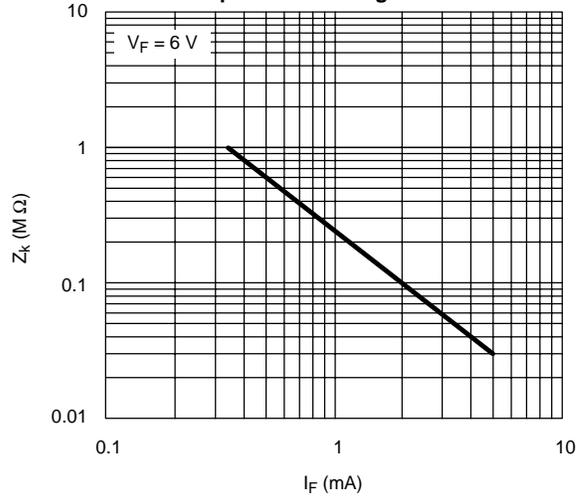
Output Current vs. Forward Voltage



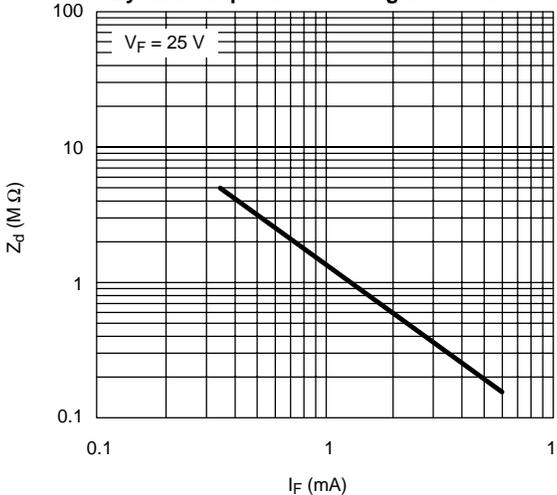
Temperature Coefficient



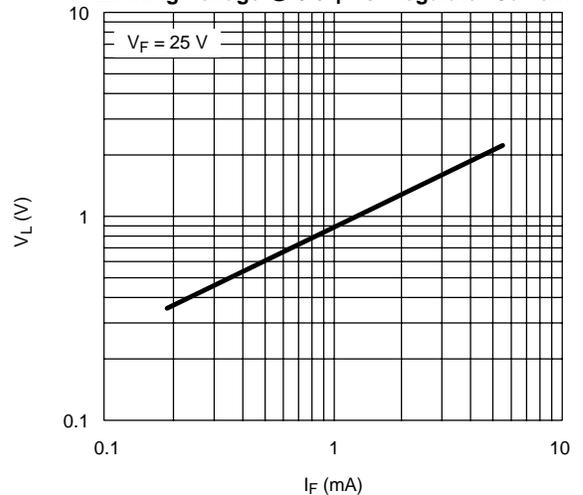
Knee Impedance vs. Regulator Current



Dynamic Impedance vs. Regulator Current

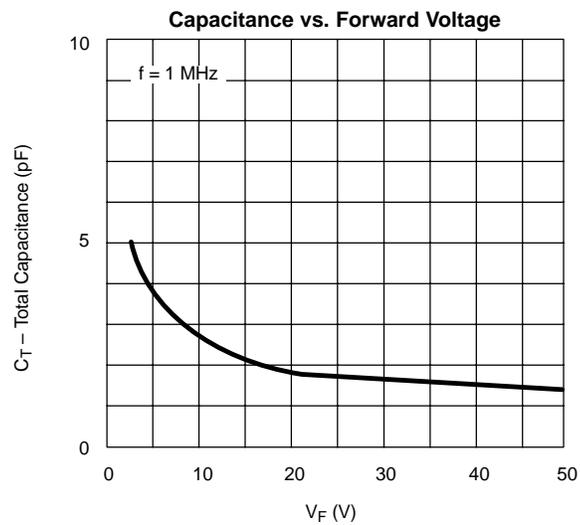
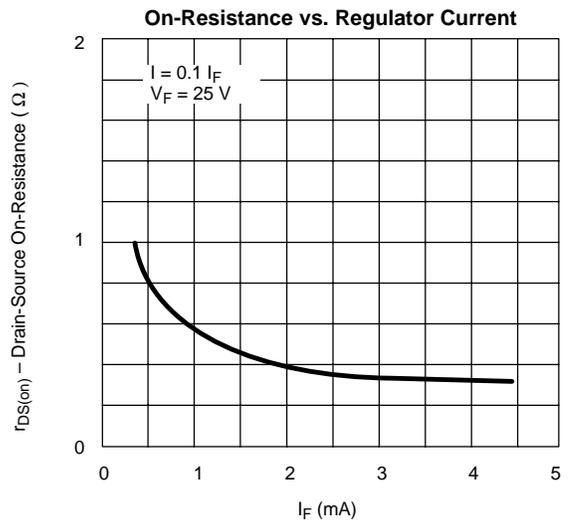
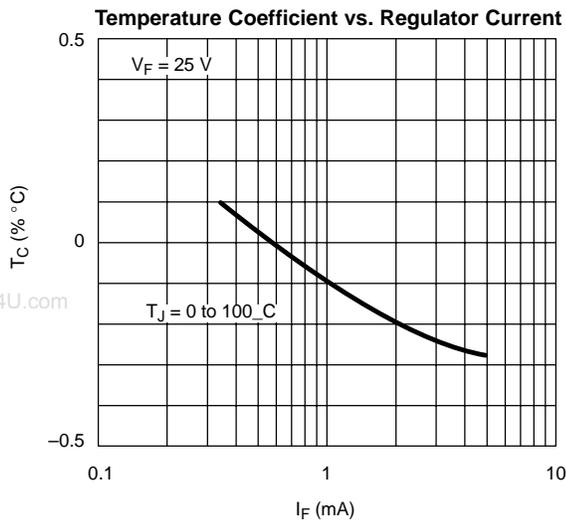


Limiting Voltage @ 0.8 I_F vs. Regulator Current

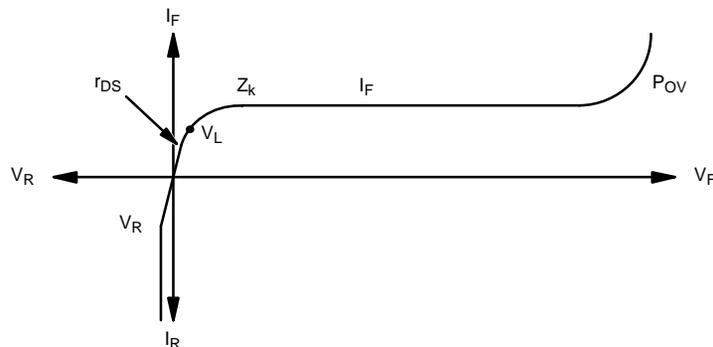




TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)



CURRENT REGULATOR DIODE V-1 CHARACTERISTIC





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